poses of decoration, as for walls, flooring, columns, pilasters, ornamental tables, and slabs, chimney-pieces, mosaics, encaustic work, &c., they appear admirably adapted.

The Derbyshire marble is not well represented in Class I., the specimens merely consisting of a few black pieces unpolished, but prepared for the operation of the turner and his lathe. The mountain limestone of Derbyshire it is well known contains some beautiful varieties chiefly of black and encrinital marbles, which give employment to a great many persons in the neighbourhood who convert them into ornamental articles. Amongst the mineral manufactures in Class XXVII. are many beautiful specimens of the Derbyshire marbles manufactured into tables, chimney-pieces, clocks, inkstands, vases, jars, candlesticks, card-cases, paper-weights, card-baskets, inlaid chess boards, mosaics, models of obeliske, and pyramids, &c. &c. See Nos. 37, 38, 40, 76, and from 79 to 83, in Class XXVII. for Derbyshire marble worked up into these various articles. The Derbyshire alabaster or gypsum, is procured from fissures in the mountain limestone (see specimens in No. 146, Class I.) The famous Derbyshire fluor spar, or fluoride of calcium, is a beautiful and interesting mineral also found in the mountain limestone associated with Baryta, calc spar, and the ores of lead and zinc. The colours vary from amethystine to violet blue, with many beautiful shades of bluish and yellowish green; and Professor Ansted states that other colours may be artificially produced by heat and by sulphuric acid. Nos. 37, 38, and 40, in Class XXVII. contain many very beautiful articles manufactured from the fluor spar.

The Exhibition contains several specimens of carboniferous limestone, which possess no value in reference to building purposes, but are highly interesting in a geological point of view. One of these is specimen No. 5 of the Dublin calp limestone, exhibited by Dr. Lentaigne to show the very singular occurrence of granitic fragments in a bed of that limestone. The specimen is from the Crumlin quarry, near Tallaght, in the county of Dublin. Dr. Lentaigne states that the granite fragments in this quarry vary in size from a cubic foot to a mere speck. They are in most cases angular, and sometimes with sharp spicular, so as to make it very unlikely that they were conveyed by water. In some cases, the fragments were broken and slightly separated, so that the granite was crossed in different directions by veins of the limestone matrix, and in one specimen the granite is traversed by a vein of white carbonate of lime, which is continued into the adjacent limestone. The thickness of the bed in which these granite fragments are found is 15 or 20 inches, dipping 20 degrees towards the granite of the Dublin mountains, and upwards of four Irish miles distant from any granite formation. Another bed containing similar fragments was met with 50 feet below this, according to the statement of the workmen, but none have been observed in the intermediate beds. Nodules of silex are found in the quarry, but it does not appear whether in the same or other beds. The granite fragments in the specimens exhibited have the quartz and mica perfect, no hornblende, and the felspar quite decomposed. No. 6 in Class I. is a specimen of carboniferous limestone, entirely covered with large fossil shells of Productus.

Record of the International Exhibition.—The Bolton local committee have suggested the erection by the commissioners of a column and statue of Prince Albert, as their president, in bronze or other metal, either in the centre of the space now occupied by the Exhibition building or elsewhere; further, that they should erect with some portion of the building materials a new building for specimens, models, documents, &c., connected with the Exhibition, and obtain permission from the Commissioners of Woods to mark the site and dimensions of the present building, if it be removed, by the erection of inscribed monolithic blocks of stone.

MECHANICAL APPLIANCES IN ARCHITECTURE.

The wholesale condemnatiou of mechanical appliances in art, recently attempted, is surely very erroneous. It is not mechanism, as such, which we should blame, but the use of mechanism as a directing power—invading the domain of man's spirit. Mechanism, so far from being subversive of man's success in art, is one of the principal means whereby his end is simplified and shortened, and is only to be condemned when it directs as well as aids. As to the gross wonder excited by the time and labour it must have taken to do certain feats, I do not think we less admire the swiftness of the steam-engine when we learn the cause, than if we were told that it was gained by amassed and unusual application of human strength: nay, the very contrary is the truth; and the smaller the cause to the greatness of the effect, is the just proportion of our wonder and pleasure. I would also animadvert on the use of the word "debased," as applied to any style: that which employed real artists, and is admired by men of cultivated taste, is not likely to be debased: we should remember what Gothic was some few years ago: what some now find glorious. Wood condemned as "debased" (the cathedral of St. Mark). We may own that there are fallings off from a certain metre of excellence, but until a style is without rule, life, or art, it cannot be called debased, or thrown from its pedestal. The cinque-cento of Italy is not a debased style, for it does not fall short of some perfect standard, nor is it the bad imitation of a good model. It exists *per se*, and is excellent for application to domestic purposes; but one would as soon think of using it for a severe and grand effect, as of writing an epic poem in lyric verse; or of planting a garden with aspens and looking forward to a pine forest.

Is liberty a lie?—is justice a phantom?—is progress a vanity?—No: nor though we fail seventy times seven in gaining them, do they still less truly exist; and their roots are as those of the young trees on the rocky mountain, firmly fixed, though storm and avalanche do their worst: the seed is sown, and will in time spring up, let us hope, into a goodly crop; and for this purpose we recognise machinery as one of the great engines of our success.

It is true that the penny pamphlet is not so fair to look on, as the monk-painted page; but which best serves to spread the generous thought, the mighty truth, the growing love? and can we now with conscience wish the machine destroyed that the hand may delight? True, the steam-engine is not so picturesque as the cavalcade,—the tunnel, as the mountain pass. Yet do these bind nations together where those bound individuals. It is not that which pleases most the artist's eye, but that which joins nations in mutual obligations which is most deserving of our admiration and most to be loved. It is individual man indeed who projects the poem, the statue, the painting; but it is machinery which renders it universal. And what commerce is to money, machinery is to art: the money suffers, and the superscription is effaced, but *man* profits. Art is not the end of art—utility to the human race forms its great claim on our consideration. To this end machinery works, and a mutual advantage takes place, for what man originates mechanism spreads, and what mechanism produces, human art should beautify; and this seems to me the natural action of each. Far be it from us, from any of us, to lose hope for all things: let us see in the present state of the world but a state of transition: what former ages originated, we perfect: what they perfected, we spread: the water was then deep, but flowed in few channels: it may now be shallow, but it fertilizes vast tracts of land.

The landscape of Claude is a finer work of art than the public panorama, but which does most service—affords widest pleasure? The statue is nobler than the cast, but which is of most general use? Not the super-eminence of a gifted few, but the progress of the people generally is the great object of our epoch: and when the manure has been more equally spread over the waste land, who can tell what sweet fruit in future years it may bear. Let us seek a Providence in all things: nay, let us firmly trust in it, and we shall do joyfully our appointed work: inferior it may be to the men of old, but strong in the belief of its purpose, *let us work*, not regretful of the past, but full of hope for the future.

J. B. Waring.

AMERICAN MATTERS.

The Astor Library, New York, according to the American papers, promises to be a fine building. It is in the Romanesque style of architecture, with an interior commodiously designed. Scarcely any wood has been employed in its construction, the floors of the second story resting on vaults turned in brick and covered with stucco. To give strength to the building, and avoid the danger of fire, a good deal of iron is used. The pillars, pilasters, capitals, and other ornamental parts of the inside are in stucco. The whole woodwork may be burned without destroying the building.

Art.—Mr. Elliot, a distinguished artist of New York, has received an order from one of the merchant princes of that city, but formerly of Syracuse, to paint 2,000 dollars worth of portraits, being twenty in number, of the original settlers of Syracuse. They are intended as a present to that thriving young city, to be placed in one of its public buildings.

The Fire Annihilator.—The American patent for Phillips's "Fire Annihilator" has been purchased by an association of capitalists and business men in the United States. The Hon. Elisha Whittlesey, First Comptroller of the United States Treasury, has been appointed president of the company. We hope it will be better managed than, according to our way of thinking, has been the case in England.

Paine's Gas.—Mr. Paine announces that, having overcome the objections of the patent office examiner, a patent for his new mode of rendering atmospheric air combustible, will issue in its proper order and time. In the meantime, he is ready to contract "to light hotels, factories, or private dwellings, with a superior light, fifty per cent. less than that of any other artificial light known." About six weeks ago his application for a patent was rejected, on the ground that the invention claimed was identical with that of Mansfield's, patented in England in 1845.

Dr. Bethune's Church, Brooklyn, New York.—This is an edifice now in progress of erection for the Central Dutch Reformed Church Society. Its architecture is described as a combination of several of the classic styles. It presents two fronts, the principal one of which is located on Pierrepont-street, the other on Munroe-place: the former has for its façade, projections of 5 feet from the flanking sides, composed of four pilasters on pedestals which support the pediment and all the parts that appertain to the Roman Corinthian order. Both fronts are of brown stone, from Conn and Baldwin's quarries, near Newark, New Jersey. There is a lot on the corner 25 feet by 100 feet, on which a parsonage is to be built. The two fronts will appear to form two distinct designs. The design of the steeple is singular in form and details, and to some extent original; but when it is finished it is believed that it will be free from any inconsistent or distorted features. The extension of the building is of the Roman Corinthian order, and contains ten columns and twenty-four pilasters standing upon pedestals. The ceiling is formed of longitudinal and transverse-segmental arches, over and on the cross of which stands a dome 36 feet in diameter, resting on pendentives. The segmental arches, pendentives, and dome are highly ornamented with large and bold panels and rich mouldings. The interior is to be lighted by plates of glass 4 feet by 5 feet, and three-eighths of an inch in thickness, fitted in the roof; through which the light passes, and is conveyed by inner plates of glass fitted in the panels and segmental arches to the interior. Each plate has an ornamental register by which the temperature of the atmosphere within is regulated: there are also a large skylight and a

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